



Chickahominy River 2005

Background

In 2000, VDGIF started receiving angler complaints regarding largemouth bass fishing in the tidal Chickahominy River. Since that time VDIGF has focused extensively on the situation. Results of several years of research indicate the largemouth population in this river experienced year-class failures in 1999 and 2000, and several weak year-classes during the late 1990's. Almost no young-of-year (YOY) largemouth occurred in electrofishing samples collected during the fall of 2000, an indication that either adult largemouth were not spawning successfully or young bass were not surviving the summer during this period. These year-class failures resulted in a reduced catch of largemouth, particularly those bass smaller than 15 inches, during the 2000-2002 timeframe.

This situation was not limited to the Chickahominy River, as the draught of the mid- to late 1990's wore on, tidal rivers throughout the region experienced similar "declines" in largemouth bass populations. Recent research has detected similar patterns of variability in year-class strength on other rivers. While the exact cause remains undetermined, changes in water quality and/or habitat due to reduced freshwater inputs during the drought are likely culprits.

Current status & outlook

In spite of extremes in weather patterns (Figure 1) the Chickahominy River largemouth population has had no further year-class failures since 2000 (Figure 2). Growth of largemouth bass in the tidal Chickahominy is good, though slightly slower than the tidal James. However, as in the James, growth of largemouth slows after about 2 ½ years of life. This is why, in spite of good survival (27% annual mortality), there are not many bass over 5 pounds in this river system.

Largemouth catch rates were generally much higher during the 2004 electrofishing survey compared to 2000 and 2001 (Figure 3), and largemouth in the 12-15 inch range were abundant and bass to 3 lbs were common, with a few bass to 5 pounds collected. As in previous years adult bass continued to be in excellent condition.

Age	Avg. Length (in.)
0	6
1	11
2	13
3	15
4	14
5	16
6	17
7	18

As in the James, following several years of good recruitment of young bass into the adult population, anglers should see continued improvement in the fishery in 2005. With higher catch rates of the 12 – 15 inch largemouth typical of the tidal Chickahominy.

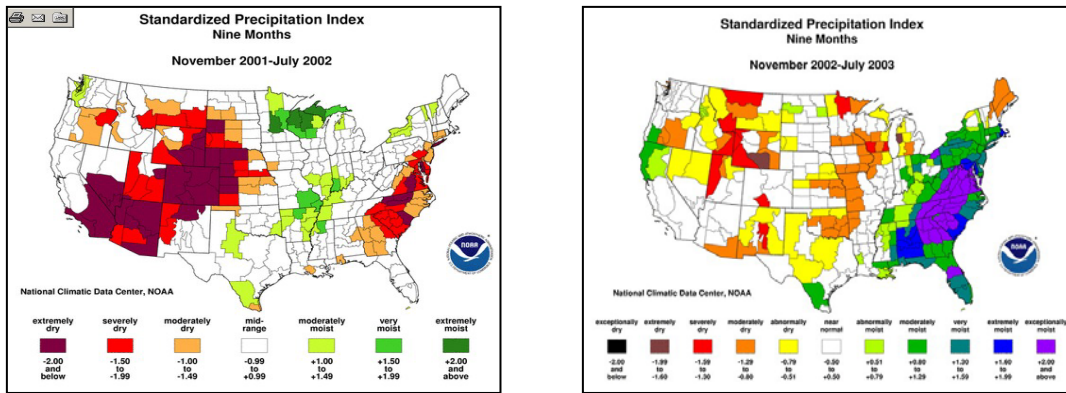


Figure 1. Comparison of drought conditions in 2002 with record wet conditions one year later – While February 2002 was the second driest on record, February 2003 was the wettest on record in our region.

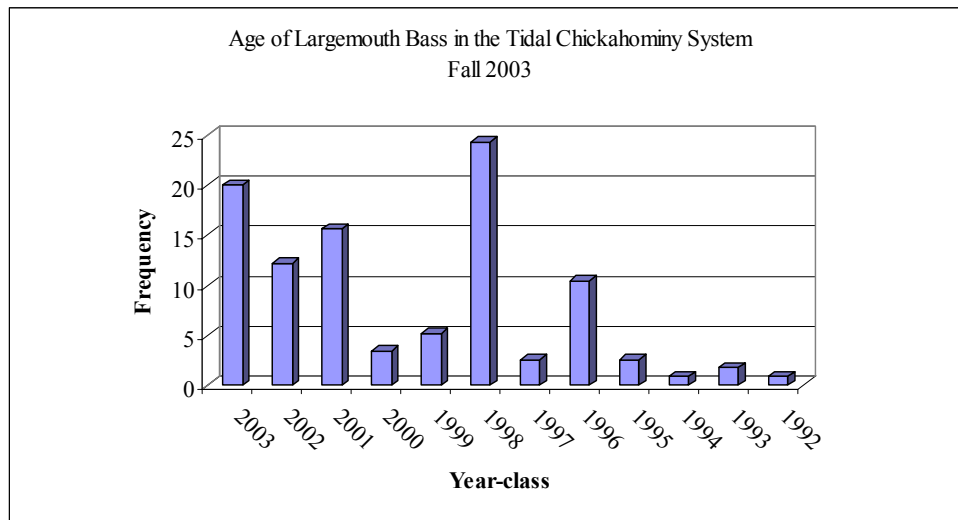


Figure 2. Frequency of occurrence of largemouth bass in fall 2003 electrofishing samples from the tidal Chickahominy River system. There have been good year-classes since the failed year-classes of 1999 and 2000. Note the strong year-class in 1998, an exception in a prolonged period of drought.

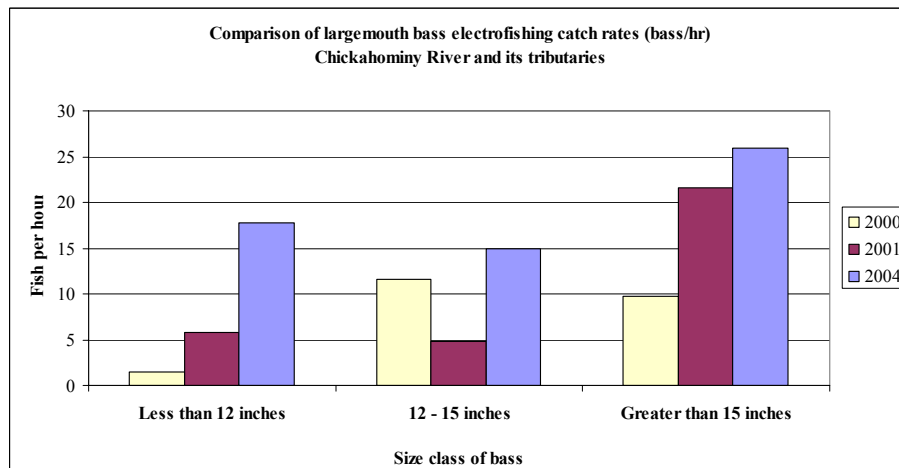


Figure 3. Comparison of the catch rates for three size categories of largemouth bass collected by electrofishing the tidal Chickahominy River system in 2000, 2001, and 2004.